



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,146	02/20/2004	Saurab Nog	MS1-1854US	5385
22801	7590	03/18/2010		
LEE & HAYES, PLLC 601 W. RIVERSIDE AVENUE SUITE 1400 SPOKANE, WA 99201			EXAMINER JAKOVAC, RYAN J	
			ART UNIT 2445	PAPER NUMBER
			NOTIFICATION DATE 03/18/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhptoms@leehayes.com

### Office Action Summary

**Application No.**

10/784,146

**Applicant(s)**

NOG ET AL

**Examiner**

RYAN J. JAKOVAC

**Art Unit**

2445

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 4, 9, 11-14, 25-28, 31, 33 and 35-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 9, 11-14, 25-28, 31, 33, 35-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed 01/15/2010 has been entered.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1-2, 4, 9, 11-14, 25-28, 31, 33, 35-40 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4, 9, 11-14, 25-28, 31, 33, 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0010616 to McCanne in view of US20040213223 to Mori et al (hereinafter Mori).

Regarding claim 1, 25, McCanne teaches a method comprising:

receiving a message at a routing node in an overlay network, the message comprising a header and a body, wherein the header comprises information for routing the message (McCanne, [0034], routing address information is carried in the message header. See also [0055].);

passing the message to the application level at the routing node to process the message (McCanne, abstract, routing messages are processed at the application level. See also, [0009-0010], [0027], and [0033].);

generating by the routing node a routing policy message, the routing policy message including a routing policy, wherein the routing policy comprises instructions for routing nodes for redirecting messages, wherein redirecting is based at least in part on the body of the message (McCanne, [0044-0046], routing occurs at the application level based on exchanged messages. See also, [0203-0206], fig. 6.);

sending the routing policy message to a sending node (McCanne, [0009-0011], application level control is applied to transferred data. Nodes forward the routing messages after they routing policy is computed at the application level. See also, [0041-[0049].);

instructing the sending node to bypass a first routing node and issue the routing policy message to a second routing node, the instructing based in part on the routing policy of the routing policy message (McCanne, [0203-0206], instructions are included to bypass nodes outside the designated overlay channel. "Packet 210 is received by MediaBridge computer M2. M2 is part of a native multicast group and so is able to distribute the packet via native multicast

over the native multicast channel "a." Accordingly, M2 changes the destination and source indicators in the native header to "a" and M2, respectively. Packet 212 is then transmitted throughout multicast domain 214 where it is received by M3 and M4. MediaBridges such as M5 which haven't joined native multicast group "a" do not receive packet 212.");

identifying by the sending node the final destination address to which to route the message based in part on the routing policy of the routing policy message (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.);

after identifying the final destination address, incorporating by the sending node the routing policy into the body of the message and forwarding by the sending node the message to the final destination address in the overlay network based on the instructions (McCanne, routers forward messages and compute routes including sources and destinations. See [0044-0046], [0166-0172].); and

McCanne discloses generating a routing policy for a sending node, wherein the routing policy comprises instructions for redirecting messages as described above. The routing policy of McCanne is generated and comprises instructions based on the header and the overlay header as described in at least [0203-0206] and fig. 6. It would have been obvious to one of ordinary skill in the art at the time of the invention combine generating routing policy based on the body of the message as claimed by the Applicant with the teachings of McCanne in view of McCanne's generation of routing policy based on headers or overlay headers since these differences amounts to mere variation and/or design choice.

McCanne does not expressly disclose returning the routing policy message which includes the routing policy to the sending node when it is determined that the sending node does

not have routing policy instructions derived from the body of the message, however the routing nodes of McCanne forward routing messages between each other in order to route messages. It would have been obvious to one of ordinary skill in the art at the time of the invention in order to use basic error checking, such as making sure there was routing policy data contained in the message, and if not, returning the routing policy to the sending node.

McCanne does not expressly disclose accessing a routing table by the second routing node to determine a final destination address to route the message, the routing table includes categories of messages and a corresponding address for the message. However, Mori discloses accessing a routing table by the second routing node to determine a final destination address to route the message, the routing table includes categories of messages and a corresponding address for the message (Mori, abstract, [0033-0042], type of message and destination are determined according to routing table, see figs. 3-7. See also fig. 8, step S801.);

Therefore it would have been obvious to combine accessing a routing table by the second routing node to determine a final destination address to route the message, the routing table includes categories of messages and a corresponding address for the message as taught by Mori in order to be able to route messages to a plurality of types of networks (Mori, abstract).

Regarding claim 11, the combination of McCanne and Mori teaches the method of claim 1, further comprising receiving a plurality of routing policies at a sending node from a plurality of routing nodes in the overlay network (McCanne, [0132], tracking group membership at an overlay node. See also, fig. 5.).

Regarding claim 13, the combination of McCanne and Mori teaches the method of claim 1, further comprising applying a transport policy to the message by the sending node after changing the address in the header of the message (McCanne, [0034], [0055], modification of header information including address.), wherein the transport policy defines which transportation protocol with which to send the message (McCanne, [0012], [0049-0050].).

Regarding claim 31, 37, McCanne teaches a computer program storage medium storing a computer program for executing on a computer system a computer process, the computer process method, the method comprising: identifying at least one routing policy for a message, the message comprising a header and a body, wherein the header comprises information for routing the message (McCanne, [0034], routing address information is carried in the message header. See also [0055].), wherein the routing policy comprises instructions for redirecting messages based at least in part on content of the body of the message (McCanne, [0044-0046], routing occurs at the application level based on exchanged messages. See also, fig. 6.); changing an address in the message to bypass at least one node in an overlay network based on the at least one routing policy (McCanne, [0203-0206], instructions are included to bypass nodes outside the designated overlay channel. "Packet 210 is received by MediaBridge computer M2. M2 is part of a native multicast group and so is able to distribute the packet via native multicast over the native multicast channel "a." Accordingly, M2 changes the destination and source indicators in the native header to "a" and M2, respectively. Packet 212 is then transmitted throughout multicast domain 214 where it is received by M3 and M4. MediaBridges such as M5 which haven't joined native multicast group "a" do not receive packet 212." See also fig. 5 and

[0176].); identifying the final destination address to which to route the message (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); incorporating the routing policy into the body of the message and issuing the message in the overlay network directly to the final destination address (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); and sending the at least one routing policy to a sending node in the overlay network (McCanne, routers forward messages and compute routes including sources and destinations. See [0044-0046], [0166-0172].).

McCanne does not expressly disclose returning the routing policy message which includes the routing policy to the sending node when it is determined that the sending node does not have routing policy instructions derived from the body of the message, however the routing nodes of McCanne forward routing messages between each other in order to route messages. It would have been obvious to one of ordinary skill in the art at the time of the invention in order to use basic error checking, such as making sure there was routing policy data contained in the message, and if not, returning the routing policy to the sending node.

McCanne does not expressly disclose accessing a routing table by the second routing node to determine a final destination address to route the message, the routing table includes categories of messages and a corresponding address for the message. However, Mori discloses accessing a routing table by the second routing node to determine a final destination address to route the message, the routing table includes categories of messages and a corresponding address for the message (Mori, abstract, [0033-0042], type of message and destination are determined according to routing table, see figs. 3-7. See also fig. 8, step S801.);

Therefore it would have been obvious to combine accessing a routing table by the second routing node to determine a final destination address to route the message, the routing table includes categories of messages and a corresponding address for the message as taught by Mori in order to be able to route messages to a plurality of types of networks (Mori, abstract).

Regarding claim 4, 26, 36, the combination of McCanne and Mori teaches the method of claim 1, wherein generating the routing policy is at an application level in the routing node (McCanne, [0051-0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.). McCanne does not expressly disclose wherein a compression policy is applied to the message prior to forwarding the message to the final destination node in the overlay network. However, it would have been obvious to one of ordinary skill in the art at the time of invention to apply a compression policy with the method of McCanne in order to encode information using fewer bits, thereby reducing the consumption of resources. See *KSR v. Teleflex*, 550 U.S. \_\_\_, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007).

Regarding claim 9, 14, 28, 35, 38, the combination of McCanne and Mori teaches the method of claim 1, further comprising: applying a transport policy to the message only after applying each identified routing policy to the message, wherein the transport policy defines a transportation protocol over which to transport the message (McCanne, [0012], [0049-0050].), further comprising iteratively applying by the node a plurality of routing policies to the message, each of the plurality of routing policies modifying the address in the message (McCanne, [0044-0052], overlay multicasting.) McCanne does not expressly disclose applying an encryption

policy prior to forwarding the message to the final destination node in the overlay network.

However, it would have been obvious to one of ordinary skill in the art at the time of invention to apply an encryption (i.e. security) policy with the method of McCanne in order to facilitate secure communications, which is a well known advantage in networking environments. See KSR v. Teleflex, 550 U.S. \_\_\_, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007).

Regarding claim, 33, the combination of McCanne and Mori teaches the system of claim 31 wherein the method further comprises iteratively applying a plurality of routing policies to the message, each of the plurality of routing policies changing the address in the message (McCanne, [0048-0053], [0115-0120]).).

Regarding claim 2, 12, 27, 39, the combination of McCanne and Mori teaches the method of claim 1, further comprising: after passing the message to the application level at the routing node, modifying an address of the header of the message, to create a modified address (McCanne, [0034], [0055], modification of header information including address.); after generating the routing policy for the sending node based at least in part on the body of the message, determining from the message if the sending node does not have routing policy instructions derived from the body of the message after the message is passed to the application level of the routing node (McCanne, [0051-0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); and generating the routing policy based on the modified address (McCanne, [0051-0055]). McCanne does not expressly disclose returning the routing policy to the sending node if it is determined that the sending node does not have routing policy

instructions derived from the body of the message, however the routing nodes of McCanne forward routing messages between each other in order to route messages. It would have been obvious to one of ordinary skill in the art at the time of the invention to use basic error checking, such as making sure there was routing policy data contained in the message, and if not, returning the routing policy to the sending node.

5. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne in view of Mori, and further in view of US 2003/0120817 to Ott et al (hereinafter Ott).

Regarding claim 40, the combination of McCanne and Mori teaches the method of claim 1, further comprising: after returning the routing policy message to the sending node. McCanne does not expressly disclose the routing node combining the routing policy with other received routing policies into a master routing policy for nodes in the overlay network.

However, Ott discloses the routing node combining the routing policy with other received routing policies into a master routing policy for nodes in the overlay network (Ott, [0023]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of McCanne and Ott in order to create content routing tables for forwarding packets through a network (Ott, [0023]).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN J. JAKOVAC whose telephone number is (571)270-5003. The examiner can normally be reached on Monday through Friday, 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan Jakovac/

/VIVEK SRIVASTAVA/  
Supervisory Patent Examiner, Art Unit 2445